

A layered polycrystalline structure includes a seed crystal or Cr layer containing non-magnetic Cr atoms. A non-magnetic crystal layer such as a  $\text{Co}_{65}\text{Cr}_{35}$  layer is formed on the exposed surface of the seed crystal layer. A magnetic crystal layer such as a  $\text{Co}_{88}\text{Pt}_{12}$  layer is formed on the exposed surface of the non-magnetic crystal layer. Heat treatment induces the diffusion of the Cr atoms along the grain boundaries within the magnetic crystal layer. Walls of a non-magnetic material can be established along the grain boundaries in the magnetic crystal layer. The diffusion of the Cr atoms can sufficiently be suppressed within the lattices of the magnetic crystal grains. Generation of an incomplete non-magnetic region can thus be restrained to the utmost within the magnetic crystal layer. Noise can be reduced in reproduction of a magnetic information data.